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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/766,441 | 01/27/2004 | Naoki Matsumoto | FUJI 20.904 | 3619 |

26304 7590 04/10/2007
KATTEN MUCHIN ROSENMAN LLP
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NEW YORK, NY 10022-2585

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| EXAMINER |
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BELANI, KISHIN G

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| ART UNIT | PAPER NUMBER |
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2109

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/10/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|-------------------------------|----------------------------------|--|
| Office Action Summary | Application No. 10/766,441 | Applicant(s) MATSUMOTO, NAOKI | |
| | Examiner Kishin G. Belani | Art Unit 2109 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>1/27/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement submitted on 01-27-2004 has been considered by the Examiner and made of record in the application file.

Drawings

The drawings are objected to because of the following informalities:

In Fig. 1, block 11 is not labeled. The examiner has interpreted it to be the Layer-2 Switch.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by **Ishizaki et al. (U.S. Patent Publication # 7,085,827 B2)**.

Consider **claim 1**, Ishizaki et al. clearly show and disclose a connection management apparatus for connecting a plurality of physically connectable network devices based on connection paths set for individual users (Fig. 1, showing connection paths through VPN block 140 for individual users marked Customer A-D, VPN router block 160, VLAN switch 170, servers 180, 182, 184, and 186, Fiber Channel switch 190,

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storage volumes 195, along with Service Management System 100; column 7, lines 4-20 that describe these components), comprising:

a client port connectable to the users via a network (Fig. 1, blocks marked 132 and 134 for customer A; column 6, lines 24-27 which disclose that the customer site and the data center of the service provider are connected via the Internet);

a server port connectable to a server (Fig. 1, VLAN Switch block 170 showing multiple output ports connected to different servers 180, 182, 184, and 186; column 7, lines 4-10 that disclose the connections between the switch 170 and the servers listed);

a lookup table including one or more pairs of tags and destination addresses, each of said pairs indicating a user and a next destination of a received packet by using a tag attached to the received packet as a search key wherein said attached tag indicates a user and a destination (Fig. 5, VPN Table 500 used as a lookup table with tags VPN ID and VLAN ID and addresses Address 1 and Address 2 that identify the source and destination addresses based on the VPN ID identifying the customer and the packet's destination address; column 6, lines 36-41 that disclose an association between a user and the corresponding VPN ID tag; column 9, lines 4-13 that describe different fields associated with the VPN Table in Fig. 5); and

a tag replacement and transmission part replacing a tag of the received packet with a tag detected from the lookup table and transmitting the resulting packet to a destination address detected from the lookup table (Fig. 1, Virtual-Router A block 165; column 6, lines 51-56 which disclose how Virtual Router for customer A adds VLAN tag (corresponding to the VPN ID tag from the VPN Table 500) to the packet before sending

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it to VLAN switch, so that more than two logically independent networks can be overlaid on the same LAN segment; flowcharts of Fig. 11-13 which show that when reconfiguration of VPN Table or servers or storage volumes takes place, the corresponding tables are updated to redirect the packets to newly configured units; column 10, lines 31-48, and 53-67; column 11, lines 1-4, and lines 10-28 which describe the reconfiguration processes);

wherein a packet received from one of the users and the server is transmitted to one of the plurality of network devices and a packet received from one of the plurality of network devices is transmitted to one of the plurality of network devices, the server and the users (Fig. 1 that shows packets from different customers traversing through VPN 140, VPN router 160, VLAN switch 170, and servers 180, 182, 184, or 186; Fig. 1 also shows data from storage volumes 195 traversing via Fiber Channel switch 190 to servers 180, 182, 184, or 186 via VLAN switch and VPN router to different customers based on the source and destination addresses specified in VPN Table 500).

Consider **claim 6** and **as applied to claim 1 above**, Ishizaki et al. clearly show and disclose a connection management apparatus wherein the lookup table is rewritable through a terminal (Fig. 1 that shows an operator console application 120 interfacing with VPN Management System 210, which in turn is linked to VPN router 160; Fig. 11 that shows the process of reconfiguring the VPN Table depicted in Fig. 5; column 10, lines 31-38 that disclose a command packet created from the operator's console application to reconfigure the VPN routing table).

Consider **claim 7** and **as applied to claim 1 above**, Ishizaki et al. clearly show and disclose a connection management apparatus wherein the tag is a VLAN tag (Fig. 5, VPN Table 500 that clearly show a VLAN ID tag; column 9, lines 4-13 which disclose the structure of VPN Table 500, including the VLAN tag).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizaki et al. (U.S. Patent Publication # 7,085,827 B2) in view of Terrell et al. (U.S. Patent Application Publication # 2003/0189936 A1).

Consider **claim 2** and **as applied to claim 1 above**, Ishizaki et al. clearly show and disclose the claimed invention, including showing star topology around VLAN switch 170 in Fig. 1 with VPN router 160 and servers 180, 182, 184, and 186 connected to it in star topology. However, Ishizaki et al. fail to specifically disclose the star topology in the specifications.

In the same field of endeavor, Terrell et al. disclose a connection management apparatus, wherein the plurality of network devices are connected in a star topology (paragraph 0073, lines 1-4 that disclose a star interface for sub-network 170).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to connect a plurality of network devices in a star topology, in order to provide continued operation of the rest of the network, if any device fails, by reconfiguring the routing table to bypass the failing device.

Consider **claim 3** and **as applied to claim 2 above**, Ishizaki et al., as modified by Terrell et al., further show and disclose a connection management apparatus wherein in the lookup table search keys are grouped for each of the users (Fig. 5, VPN Table 500 that clearly show the search key VPN ID grouped by customers, e.g. for customer A, the two sites Aa and Ab are grouped together; column 9, lines 4-13 which disclose the structure of VPN Table 500).

Allowable Subject Matter

Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Consider **claim 4**, the best prior art found during the examination of the present application, **Ishizaki et al. (U.S. Patent Publication # 7,085,827 B2)** in view of **Terrell et al. (US Patent Application Publication # 2003/0189936 A1)**, fails to specifically disclose the limitation of the connection management apparatus, wherein in the lookup table the search keys are further grouped for each of an up-directional connection path of a packet transmitted from a client side to a server side and a down-directional connection path of a packet transmitted from the server side to the client side.

Claim 5 is also objected to as being allowable by virtue of its dependency on **claim 4**.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patent Application Publication: US 2001/0049739 A1, inventors: Wakayama et al.

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Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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P.O. Box 1450
Alexandria, VA 22313-1450

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Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kishin G. Belani whose telephone number is (571) 270-1768. The Examiner can normally be reached on Monday-Thursday from 6:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Perez Gutierrez can be reached on (571) 270-1767 or (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Kishin G. Belani
K.G.B./kgb

March 29, 2007


RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER

4/4/07